

01/29/2008

Appln. no. 10/822,077  
Response dated January 14, 2008  
Office Action dated November 14, 2007

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of the claims in the application.

### **Listing of Claims**

1. (currently amended) A method comprising:

providing a multi-port memory having ~~a plurality of multi-bit read ports~~ eight multi-bit read ports and a write port, each read port including ~~a multi-bit interface and a~~ filter coefficient value representing a dispersion compensation value associated with an optical link; and  
processing an input optical signal using the filter coefficient values in the multi-port memory to generate an output optical signal for transmission on the optical link.

2. (currently amended) The method of claim 1, wherein the ~~multi-port memory is a nine-port memory having eight multi-bit read ports~~ are twelve-bit read ports.

3. (original) The method of claim 1, wherein processing the input optical signal comprises:

receiving the input optical signal;  
sampling the input optical signal to provide an input data stream; and  
applying the filter coefficient values to the input data stream to generate one or more output data streams.

4. (original) The method of claim 3, wherein applying the filter coefficient values to the input data stream comprises:

identifying a first portion of the input data stream as an address to the multi-port memory;  
retrieving a filter coefficient value from the multi-port memory using the address; and  
adding the retrieved filter coefficient value to a second portion of the input data stream to generate an output data stream.

5. (currently amended) A digital filter comprising:

one or more functional units, each functional unit being associated with a lookup table of filter coefficient values, each functional unit to process an input data stream using the filter